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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,530	10/01/2003	Chandra Bontu	85773-417	5356

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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2613

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,530	Applicant(s) BONTU, CHANDRA	
	Examiner Hanh Phan	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 02/01/2007.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-In Claims 1, 17, 28 and 36, the phrase "a stream of samples of an electrical signal" is unclear or undefined. What element produces a stream of samples of an electrical signal.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 17, 18 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Schyndel (US Patent No. 6,775,631).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 17 and 36, referring to Figure 2, Van Schyndel discloses a system for detecting digital symbols carried in a received optical signal, comprising:

a functional element (i.e., a square root function 45, Fig. 2) operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample, thereby to produce a stream of processed samples (i.e., Fig. 2, col. 2, lines 59-67, col. 3, lines 1-63 and col. 4, lines 35-42);

a detector (i.e., Threshold detector, Fig. 2) operative to render decisions about individual symbols present in the received signal on the basis of the stream of processed samples (i.e., Fig. 2, col. 2, lines 59-67, col. 3, lines 1-63 and col. 4, lines 35-42).

Regarding claims 2 and 18, van Schyndel further discloses wherein the non-linear function is substantially the square root (i.e., Fig. 2, col. 2, lines 59-67, col. 3, lines 1-63 and col. 4, lines 35-42).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 17, 27 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessios (US Patent No. 7,110,683) in view of Gitlin et al (US Patent No. 5,191,462).

Regarding claims 1, 17, 27 and 36, referring to Figures 1 and 3, Bessios teaches a system for detecting digital symbols carried in a received optical signal, comprising:

a element (i.e., spectral shaping detector 205, Fig. 1) operative to receive a stream of samples of an electrical signal derived from the received signal to produce a stream of processed samples (i.e., Figs. 1 and 3, col. 3, lines 22-50, col. 4, lines 23-67 and col. 5, lines 1-40);

a detector (i.e., spectral shaping detector 205, Fig. 1) operative to render decisions about individual symbols present in the received signal on the basis of the stream of processed samples (i.e., Figs. 1 and 3, col. 3, lines 22-50, col. 4, lines 23-67 and col. 5, lines 1-40).

Bessios differs from claims 1, 17, 27 and 36 in that he fails to specifically teach a functional element (i.e., a square root function 45, Fig. 2) operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a

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non-linear function of each received sample. Gitlin et al, from the same field of endeavor likewise teaches an optical receiver (Figure 1). Gitlin et al further teaches a functional element operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample (i.e., Fig. 1, col. 2, lines 28-62, col. 4, lines 12-67 and col. 5, lines 1-43). Based on this teaching, it would have been obvious to one having skill in the art at the time invention was made to incorporate the functional element operative to receive a stream of samples of an electrical signal derived from the received signal and to evaluate a non-linear function of each received sample as taught by Gitlin et al in the system of Bessios. One of ordinary skill in the art would have been motivated to do this since allowing improving recovery of the transmitted signal.

Allowable Subject Matter

8. Claims 3-16 and 19-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome the 112 rejection.
9. Claims 28-35 are allowed (if overcome the 112 rejection above).

Response to Arguments

10. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER